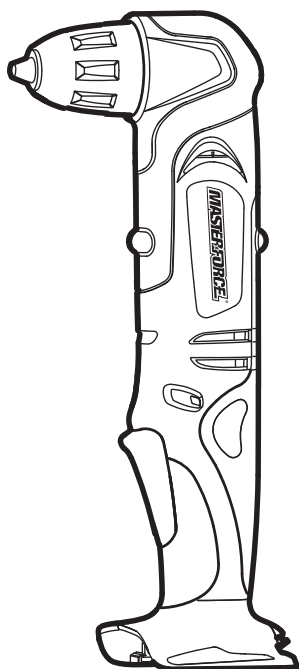


MASTERFORCE®

FLEXPOWER®

CHOOSE YOUR TOOL. CHOOSE YOUR POWER.

20 Volt Right Angle Drill



241-0436

OPERATOR'S MANUAL

CAUTION: To Reduce The Risk Of Injury, User Must Read And Understand The Operator's Manual. Save These Instructions For Future Reference.




For questions / comments, technical assistance or repair parts –
Please Call Toll Free: 1-866-917-4374. (M-F 8am – 6pm EST.)


TABLE OF CONTENTS

Safety Symbols	Page 2
Safety Instructions	Page 3
Overview / Specifications	Page 7
Assembly	Page 8
Operation	Page 9
Maintenance	Page 12
Troubleshooting	Page 13
Warranty	Page 14

SAFETY SYMBOLS

Some of these following symbols may be used on this tool. Please study them and learn their meaning. Proper interpretation of these symbols will allow you to operate the tool better and more safely.

Symbol	Name	Designation / Explanation
V	Volts	Voltage
A	Amperes	Current
Hz	Hertz	Frequency (cycles per second)
W	Watts	Power
Min	Minutes	Time
~	Alternating current	Type of current
—	Direct current	Type of characteristic of current
n_0	No-load speed	Rotational speed at no load
	Class II construction	Double insulated construction
.../min	Per minute	Revolutions, strokes, surface speed orbits, etc., per minute
	Wear safety goggles	<div>  WARNING: The operation of any power tool can result in foreign objects being thrown into your eyes, which can result in severe eye damage. Before beginning power tool operation, always wear safety goggles or safety glasses with side shields and a full-face shield when needed. We recommend a Wide Vision Safety Mask for use over eye-glasses or standard safety glasses with side shields. Always use eye protection which is marked to comply with ANSI Z87.1. </div>

 **WARNING:** To ensure safety and reliability, all repairs should be performed by a qualified service technician.

SAFETY INSTRUCTIONS

The purpose of safety symbols is to attract your attention to possible dangers. The safety symbols and the explanations with them deserve your careful attention and understanding. The symbol warnings do not, by themselves, eliminate any danger. The instructions and warnings they give are no substitutes for proper accident prevention measures.

⚠ WARNING: Be sure to read and understand all safety instructions in this manual, including all safety alert symbols such as “DANGER,” “WARNING,” and “CAUTION” before using this tool. Failure to following all instructions listed below may result in electric shock, fire, and/or serious personal injury.

SYMBOL MEANING



SAFETY ALERT SYMBOL: Indicates DANGER, WARNING, OR CAUTION.
May be used in conjunction with other symbols or pictographs.



DANGER: Indicates an imminently hazardous situation, which, if not avoided, will result in death or serious injury.



WARNING: Indicates a potentially hazardous situation, which, if not avoided, could result in death or serious injury.



CAUTION: Indicates a potentially hazardous situation, which, if not avoided, could result in minor or moderate injury.

NOTICE: (Without Safety Alert Symbol) Indicates a situation that may result in property damage.

SAVE THESE INSTRUCTIONS!

SAFETY INSTRUCTIONS

⚠ WARNING: Read all safety warnings and instructions. Failure to follow the warnings and instructions may result in electric shock, fire and / or serious injury.

Save all warnings and instructions for future reference.

The term power tool in the warnings refers to your mains-operated (corded) power tool or battery-operated (cordless) power tool.

⚠ WARNING: Risk of fire and electric shock. Dry location use only. Do not expose to rain. Risk of injury.

WORK AREA SAFETY

1. **Keep work area clean and well lit.** Cluttered or dark areas invite accidents.
2. **Do not operate power tools in explosive atmospheres, such as in the presence of flammable liquids, gases or dust.** Power tools create sparks which may ignite the dust or fumes.
3. **Keep children and bystanders away while operating a power tool.** Distractions can cause you to lose control.

ELECTRICAL SAFETY

1. **Power tool plugs must match the outlet. Never modify the plug in any way. Do not use any adapter plugs with earthed (grounded) power tools.** Unmodified plugs and matching outlets will reduce risk of electric shock.
2. **Avoid body contact with earthed or grounded surfaces such as pipes, radiators, ranges and refrigerators.** There is an increased risk of electric shock if your body is earthed or grounded.

3. **Do not expose power tools to rain or wet conditions.** Water entering a power tool will increase the risk of electric shock.

4. **Do not abuse the cord. Never use the cord for carrying, pulling or unplugging the power tool. Keep the cord away from heat, oil, sharp edges or moving parts.** Damaged or entangled cords increase the risk of electric shock.

5. **When operating a power tool outdoors, use an extension cord suitable for outdoor use.** Use of a cord suitable for outdoor use reduces the risk of electric shock.

6. **If operating a power tool in a damp location is unavoidable, use a ground fault circuit interrupter (GFCI) protected supply.** Use of a GFCI reduces the risk of electric shock.

PERSONAL SAFETY

1. **Stay alert, watch what you are doing and use common sense when operating a power tool. Do not use the tool while tired or under the influence of drugs, alcohol, or medication.** A moment of inattention while operating power tools may result in serious personal injury.

2. **Use personal protective equipment.** Always wear eye protection. Protective equipment such as a dust mask, non-skid safety shoes, hard hat, or hearing protection, used for appropriate conditions, will reduce personal injuries.

3. **Prevent unintentional starting.** Ensure that the switch is in the off-position before connecting to power source and / or battery pack, picking up or carrying the tool. Carrying power tools with your finger on the switch or energizing power tools that have the switch on invites accidents.

SAFETY INSTRUCTIONS

4. **Remove any adjusting key or wrench before turning the power tool on.** A wrench or a key left attached to a rotating part of the power tool may result in personal injury.

5. **Do not overreach.** Keep proper footing and balance at all times. This enables better control of the power tool in unexpected situations.

6. **Dress properly.** Do not wear loose clothing or jewelry. Keep your hair, clothing and gloves away from moving parts. Loose clothes, jewelry or long hair can be caught in moving parts.

7. **If devices are provided for the connection of dust extraction and collection facilities, ensure that these are connected and properly used.** Use of these devices can reduce dust-related hazards.

5. **Maintain power tools.** Check for misalignment or binding of moving parts, breakage of parts and any other condition that may affect the power tool's operation. If damaged, have the power tool repaired before use. Many accidents are caused by poorly maintained power tools.

6. **Keep cutting tools sharp and clean.** Properly maintained cutting tools with sharp cutting edges are less likely to bind and are easier to control.

7. **Use the power tool, accessories, tool bits etc., in accordance with these instructions, taking into account the working conditions and the work to be performed.** Use of the power tool for operations different from those intended could result in a hazardous situation.

USE AND CARE OF THE POWER TOOLS

1. **Do not force the power tool.** Use the correct power tool for your application. The correct power tool will do the job better and more safely at the rate for which it was designed.

2. **Do not use the power tool if the switch does not turn it on and off.** Any power tool that cannot be controlled with the switch is dangerous and must be repaired.

3. **Disconnect the plug from the power source and/or the battery pack from the power tool before making any adjustments, changing accessories, or storing power tools.** Such preventive safety measures reduce the risk of starting the power tool accidentally.

4. **Store idle power tools out of the reach of children and do not allow persons unfamiliar with the power tool or these instructions to operate the power tool.** Power tools are dangerous in the hands of untrained users.

BATTERY TOOL USE AND CARE

1. **Recharge only with the charger specified by the manufacturer.** A charger that is suitable for one type of battery pack may create a risk of fire when used with another battery pack.

2. **Use power tools only with specifically designated battery packs.** Use of any other battery packs may create a risk of injury and fire.

3. **When the battery pack is not in use, keep it away from other metal objects, such as paper clips, coins, keys, nails, screws or other small metal objects that can make a connection from one terminal to another.** Shorting the battery terminals together may cause burns or a fire.

4. **Under abusive conditions, liquid may be ejected from the battery; avoid contact.** If contact accidentally occurs, flush with water. If liquid contacts eyes, also seek medical help. Liquid ejected from the battery may cause irritation or burns.

SAFETY INSTRUCTIONS

SERVICE

1. Have your power tool serviced by a qualified repair person using only identical replacement parts. This will ensure that the safety of the power tool is maintained.

SPECIFIC SAFETY RULES FOR CORDLESS DRILL/DRIVER

1. Use the tool only with the batteries and charger listed below:

Battery pack	Charger
252-8024	
252-8028	
252-8029	252-8036
252-8030	252-8037
252-8031	252-8044
252-8032	
252-8033	
252-8034	

2. Hold power tools by their insulated gripping surfaces when performing an operation where the cutting tool may contact hidden wiring or its own cord. Contact with a live wire will make exposed metal parts of the tool live and shock the operator.

3. Use protective gloves when removing the bit from the tool, or first allow the bit to cool down. The bit may be hot after prolonged use.

4. Use protective gloves when operating the tool. Protective gloves can help to keep you from being burnt and hurt.

5. Always wear safety glasses with side shields. Everyday glasses have only impact resistant lenses. They are NOT safety glasses. Following this rule will reduce the risk of eye injury.

6. Protect your lungs. Wear a face or dust mask if the operation is dusty. Following this rule will reduce the risk of serious personal injury.

7. Protect your hearing. Wear hearing protection during extended periods of operation. Following this rule will reduce the risk of serious personal injury.

8. Keep your hands away from the motor-housing vents. Hot gas comes from the vents during operation.

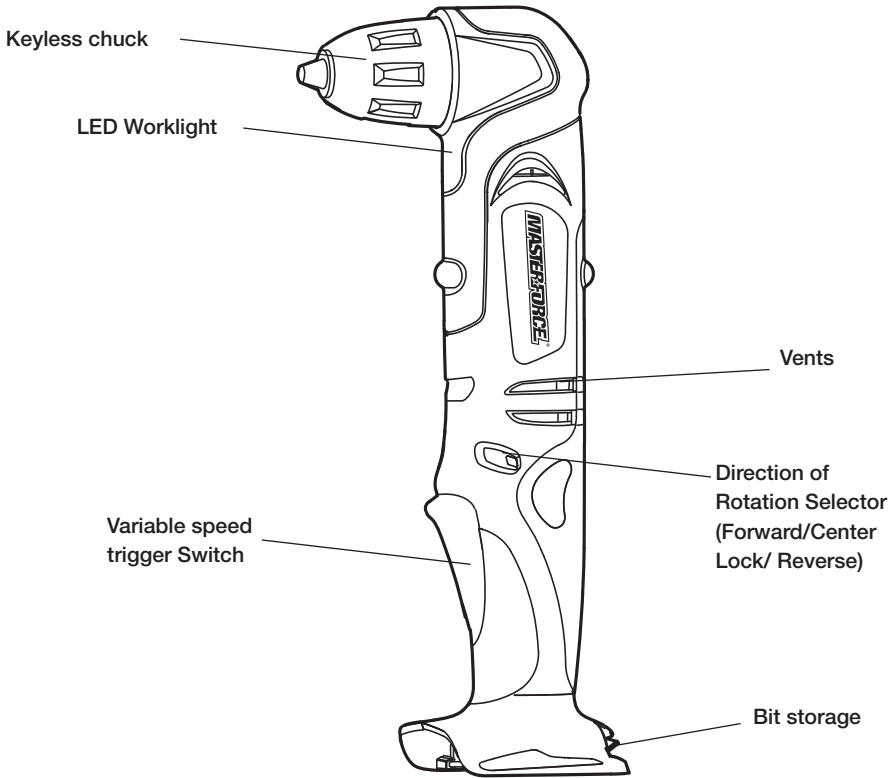
9. Do not operate the tool at full-load for more than 30 seconds, as this can cause the motor to become too hot, which may damage the motor.

10. Release the trigger immediately when the screws are tightened to avoid breaking the screw.

11. Secure work. Use clamps or a vise to hold work when practical. It is safer than using your hand and frees both hands to operate tool.

12. Know your power tool. Read operator's manual carefully. Learn the tool's applications and limitations, as well as the specific potential hazards related to this tool. Following this rule will reduce the risk of electric shock, fire, or serious injury.

OVERVIEW



SPECIFICATIONS

PRODUCT SPECIFICATIONS	
Switch	VSR (Variable Speed Reversible)
No Load Speed	0-1050 RPM
Chuck	3/8" single sleeve
Max.torque	150 in. lbs.
Drill Weight (without battery)	2 lbs. 7 oz.

ASSEMBLY

VARIABLE SPEED

The variable-speed trigger switch delivers higher speed with increased pressure and lower speed with decreased trigger pressure.

KEYLESS CHUCK

The keyless chuck allows you to hand-tighten or release the drill bit in the chuck jaws.

FORWARD/CENTER LOCK/REVERSE

The direction-of-rotation selector located above the trigger switch changes the direction of bit rotation. Setting the trigger switch in the OFF (center lock) position helps to reduce the possibility of accidental starting when not in use.

LED WORK LIGHT


Pressing the trigger switch illuminates the LED worklight, located on the front of the Right Angle Drill. This feature provides extra light for increased visibility.


BIT STORAGE


When not in use, bits provided with your drill can be placed in the storage area located on the base of the motor housing.

RIGHT ANGLE DESIGN

The drill's right angle head design allows you to get into tight work areas for drilling and driving.

 **WARNING:** If any part is broken or missing, do not attempt to plug in the power cord or operate the tool until the broken or missing part is replaced. Failure to do so could result in possible serious injury.

 **WARNING:** Do not attempt to modify this circular saw or create accessories not recommended for use with this saw. Any such alteration or modification is misuse and could result in a hazardous condition leading to possible serious injury.

 **WARNING:** To prevent accidental starting that could cause serious personal injury, always remove the battery pack from the circular when assembling parts.

UNPACKING

This product has been shipped completely assembled.

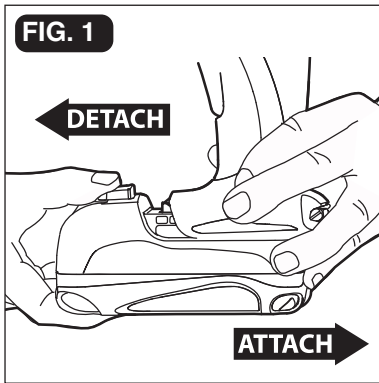
1. Carefully remove the tool and any accessories from the box. Make sure that all items listed in the packing list are included.
2. Inspect the tool carefully to make sure no breakage or damage occurred during shipping.
3. Do not discard the packing material until you have carefully inspected and satisfactorily operated the tool.

CONTENTS

Right angle drill, double end bit and Operator's manual

OPERATION

TO ATTACH BATTERY PACK (FIG. 1)



1. Lock the trigger switch on the drill by placing the direction of rotation (forward/center lock/reverse) selector in center (OFF) position.
2. Align the raised portion on the battery pack with the grooves on the bottom of the drill, and then attach the battery pack to the drill as shown.
3. Make sure that the latch on the battery pack snaps into place and the battery pack is secured to the drill before beginning operation.

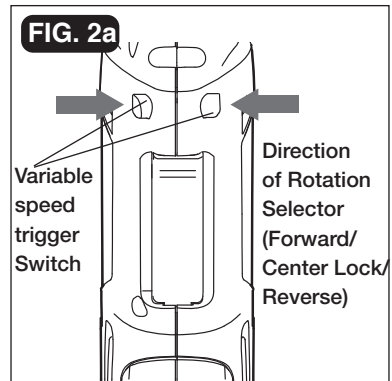
TO DETACH BATTERY PACK (FIG. 1)

1. Lock the trigger switch on the drill by placing the direction of rotation (forward/center lock/reverse) selector in center (OFF) position.
2. Depress the battery release button located on the front of the battery pack to release the battery pack.
3. Pull forward on the battery pack to remove from the tool.

WARNING: Battery tools are always in operating condition. Therefore, switch should always be locked when not in use or carrying at your side.

CAUTION: when placing battery pack on the tool, be sure that the raised rib on battery pack aligns with the groove on the saw and the latches snap into place properly. Improper assembly of the battery pack can cause damage to internal components.

TRIGGER SWITCH (FIG. 2a)



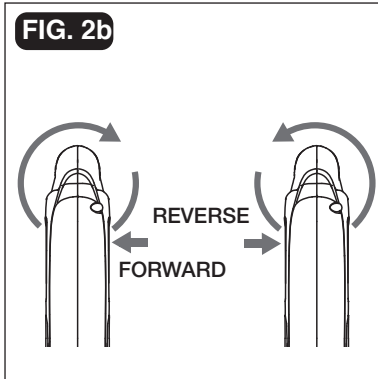
To turn the drill ON, depress the trigger switch. To turn it OFF, release the trigger switch.

VARIABLE SPEED (FIG. 2a)

The variable-speed trigger switch delivers higher speed with increased trigger pressure and lower speed with decreased trigger pressure.

OPERATION

DIRECTION-OF-ROTATION SELECTOR (FORWARD/CENTER LOCK/REVERSE) (FIG. 2b)



The direction of rotation is reversible and is controlled by a selector located above the switch trigger. With the drill held in normal operating position, the direction of rotation selector should be positioned to the left of the switch trigger for drilling. The drilling direction is reversed when the selector is to the right of the switch trigger. When the selector is in center position, the switch trigger is locked.

To stop, release switch trigger and allow the chuck to come to a complete stop.

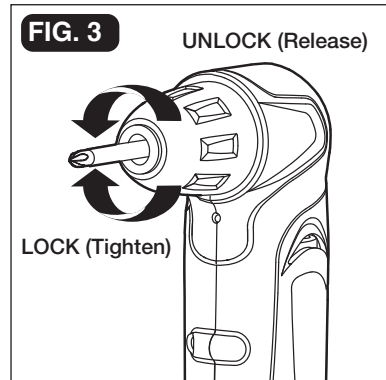
NOTICE: To prevent gear damage, always allow the right angle drill to come to a complete stop before changing the direction of rotation.

NOTICE: The right angle drill will not run unless the direction of rotation selector is engaged fully to the left or right.

ELECTRIC BRAKE

To stop the right angle drill, release the trigger switch and allow the tool to come to a complete stop. The electric brake quickly stops the chuck rotation. This feature engages automatically when you release the trigger switch.

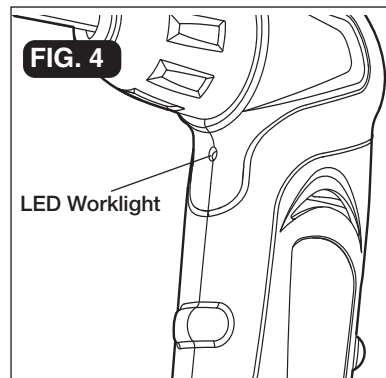
KEYLESS CHUCK (FIG. 3)



WARNING: Do not hold the chuck with one hand and use the power of the drill to tighten the chuck jaws on the drill bit. The chuck could slip in your hand, or your hand could slip and come in contact with the rotating bit. This could cause an accident resulting in serious personal injury.

The drill has a keyless chuck to tighten or release drill bits in the chuck jaws. Grasp and hold the tool with one hand. Rotate the chuck with your other hand. The arrows on the chuck indicate which direction to rotate the chuck body in order to LOCK (tighten) or UNLOCK (release) the drill bit.

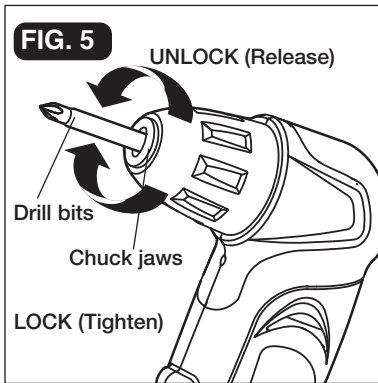
LED WORKLIGHT (FIG. 4)



OPERATION

The LED worklight, located on the front of the Drill, will illuminate when the trigger switch is depressed. This provides additional light on the surface of the work-piece for operation in lower-light areas. The LED worklight will turn off when the trigger switch is released.

INSTALLING BITS (FIG.5)



1. Lock the switch trigger by placing the direction of rotation selector in center (OFF) position.
2. Open or close the chuck jaws to a point where the opening is slightly larger than the bit size you intend to use. Also, raise the front of the drill slightly to keep the bit from falling out of the chuck jaws.
3. Insert the drill bit straight into the chuck the full length of the jaws.
4. To tighten: grasp and hold the tool with one hand, while rotating the chuck with your other hand.

NOTICE: Rotate the chuck in the direction of the arrow marked LOCK to tighten the chuck jaws. Do not use a wrench to tighten or loosen the chuck jaws.

REMOVING BITS (FIG.5)

1. Lock the switch trigger by placing the direction of rotation selector in center position.

2. To loosen the chuck jaw: grasp and hold the tool with one hand, while rotating the chuck with your other hand.

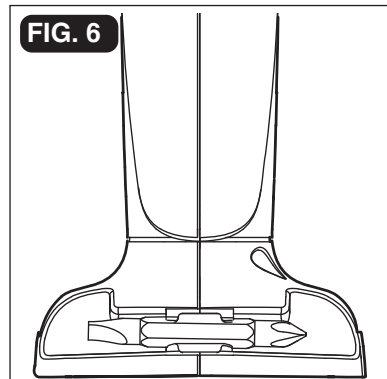
NOTICE: Rotating the chuck in the direction of the arrow marked UNLOCK to loosen the chuck jaws. Do not use a wrench to tighten or loosen the chuck jaws.

3. Remove the drill bit from the chuck jaws.

WARNING: The bit may be hot after use. Wear protective gloves or wait until the bit has cooled down before removing the bit.

WARNING: Make sure to insert the drill bit straight into the chuck jaws. Do not insert the drill bit into the chuck jaws at an angle then tighten. This could cause the drill bit to be ejected from the drill, resulting in possible serious personal injury or damage to the chuck.

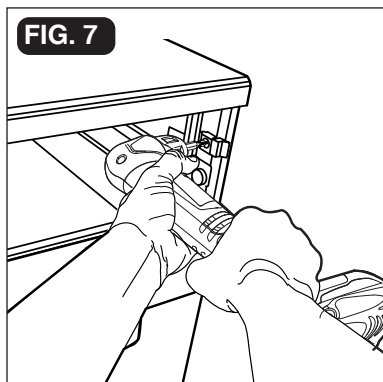
BIT STORAGE (FIG. 6)



When not in use, bits provided with the drill can be placed in the storage area located on the base of the drill.

OPERATION

DRILLING (FIG. 7)



When drilling hard smooth surfaces use a center punch to mark the desired hole location. This will prevent the drill bit from slipping off center as the hole is started. The material to be drilled should be secured in a vise or with clamps to keep it from turning as the drill bit rotates. Hold the tool firmly and place the bit at the point to be drilled. Depress the switch trigger to start the tool.

Move the drill bit into the workpiece applying only enough pressure to keep the bit cutting. Do not force or apply side pressure to elongate a hole.

⚠ WARNING: Be prepared for binding at bit breakthrough. When these situations occur, drill has a tendency to grab and kick opposite to the direction of rotation and could cause loss of control when breaking through material. If not prepared, this loss of control can result in possible serious injury.

When drilling metals, use light oil on the drill bit to keep it from overheating. The oil will prolong the life of the bit and increase the drilling action.

If the bit jams in workpiece or if the drill stalls, release switch trigger immediately. Remove the bit from the workpiece and determine the reason for jamming.

This drill has an electric brake. When the switch trigger is released, the chuck stops turning. When the brake is functioning properly, sparks will be visible through the vent slots on the housing. This is normal and is the action of the brake.

MAINTENANCE

⚠ WARNING: To avoid serious personal injury, always remove the battery pack from the tool when cleaning or performing any maintenance.

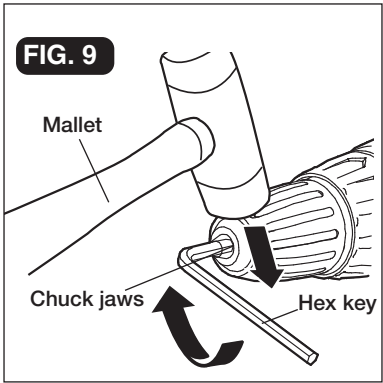
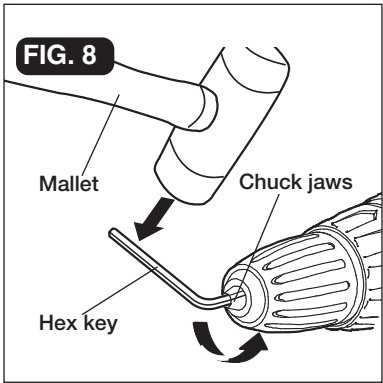
⚠ WARNING: When servicing, use only identical replacement parts. Use of any other parts may create a hazard or cause product damage. To ensure safety and reliability, all repairs should be performed by a qualified service technician at an Authorized Service Center.

GENERAL MAINTENANCE

The tool may be cleaned most effectively with compressed dry air. Always wear safety goggles when cleaning tools with compressed air.

Avoid using solvents when cleaning plastic parts. Most plastics are susceptible to damage from various types of commercial solvents. Use clean cloths to remove dirt, dust, oil, grease, etc.

CHUCK REMOVAL (FIG. 8 & 9)



To remove the chuck:

1. Lock the switch trigger by placing the direction of rotation selector in the center (OFF) position.

2. Insert a 5/16 in. hex key into the chuck of the drill and tighten the chuck jaws securely.
3. Tap the hex key sharply with a mallet in a clockwise direction. This will loosen the screw in the chuck for easy removal. Open the chuck jaws and remove the hex key. Remove the chuck screw by turning it in a clockwise direction.

NOTICE: The screw has left hand threads.

4. Insert the hex key in chuck and tighten the chuck jaws securely. Tap sharply with a mallet in a counterclockwise direction. This will loosen the chuck on the spindle. It can now be unscrewed by hand.

To retighten a loose chuck

The chuck may become loose on the spindle and develop a wobble. Periodically check the chuck screw for tightness.

1. Lock the switch trigger by placing the direction of rotation selector in center position.
2. Open the chuck jaws.
3. Insert the hex key into the chuck and tighten the chuck jaws securely. Tap the hex key sharply with a mallet in a clockwise direction. This will tighten the chuck on the spindle.
4. Open the chuck jaws and remove the hex key.
5. Tighten the chuck screw.

NOTICE: The chuck screw has left hand threads.

TROUBLESHOOTING

PROBLEM	CAUSE	SOLUTION
The Driver does not work	Battery is depleted	Charge the battery
Bit cannot be installed	Sleeve is not released	Release the sleeve
	Bit does not fit the chuck	Use the the appropriate bits
Motor overheating	Be sure cooling vents are free from dust and obstacles	Clean, clear vents. Do not cover with hand during operation



20 VOLT RIGHT ANGLE DRILL WARRANTY

90-DAY MONEY BACK GUARANTEE:

This MASTERFORCE® brand power tool carries our 90-DAY Money Back Guarantee. If you are not completely satisfied with your MASTERFORCE® brand power tool for any reason within ninety (90) days from the date of purchase, return the tool with your original receipt to any MENARDS® retail store, and we will provide you a refund – no questions asked.

3-YEAR LIMITED WARRANTY:

This MASTERFORCE® brand power tool carries our famous No Hassle 3-Year Limited Warranty to the original purchaser. If, during normal use, this MASTERFORCE® power tool breaks or fails due to a defect in material or workmanship within three (3) years from the date of original purchase, simply bring this tool with the original sales receipt back to your nearest MENARDS® retail store. At its discretion, MASTERFORCE® agrees to have the tool or any defective part(s) repaired or replaced with the same or similar MASTERFORCE® product or part free of charge, within the stated warranty period, when returned by the original purchaser with original sales receipt. Notwithstanding the foregoing, this limited warranty does not cover any damage that has resulted from abuse or misuse of the Merchandise. This warranty: (1) excludes expendable parts including but not limited to blades, brushes, belts, bits, light bulbs, and/or batteries; (2) shall be void if this tool is used for commercial and/or rental purposes; and (3) does not cover any losses, injuries to persons/property or costs. This warranty does give you specific legal rights and you may have other rights, which vary from state to state. Be careful, tools are dangerous if improperly used or maintained. Seller's employees are not qualified to advise you on the use of this Merchandise. Any oral representation(s) made will not be binding on seller or its employees. The rights under this limited warranty are to the original purchaser of the Merchandise and may not be transferred to any subsequent owner. This limited warranty is in lieu of all warranties, expressed or implied including warranties or merchantability and fitness for a particular purpose. Seller shall not be liable for any special, incidental, or consequential damages. The sole exclusive remedy against the seller will be for the replacement of any defects as provided herein, as long as the seller is willing or able to replace this product or is willing to refund the purchase price as provided above. For insurance purposes, seller is not allowed to demonstrate any of these power tools for you.

For questions / comments, technical assistance or repair parts – Please Call Toll Free at: 1-866-917-4374. (M-F 8am – 6pm EST)

**SAVE YOUR RECEIPTS
THIS WARRANTY IS VOID WITHOUT THEM**

MASTER★FORCE®

MENARDS®